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The Relationship Between Infant-Family Routines, Number of Caregivers and Infant Basal Cortisol

Vanessa M. Newell, Hannah B. White

INTRO

- Family routines have been found to be related to child adjustment, marital satisfaction, and parenting competence (Fiese, 2002).
- Persistent stress, and the resulting frequent activation of the body's stress responses, can result in excessive wear-and-tear on the body and brain known as allostatic load (McEwen, 2000)
- In infants, basal cortisol levels act as an instrument to measure allostatic load (White, 2020)
- To our knowledge, no existing work on the impact of routines on infant development has examined the role of family structure

AIM

- Examine how the number of the caregivers relates to infant basal cortisol levels
- Examine whether adherence to household routines will moderate the relationship between number of caregivers and cortisol levels

METHODS

Participants

- N = 108 3.5-month-old (M= 104.85 Age in days, SD= 9.63, 55 female) infants surveyed at the University of Kentucky Infant Memory Lab from November 2018- March 2020
- Secondary data analysis was executed using a moderator analysis

Demographics	Percentage
Race/Ethnicity	
Asian	1.9%
Black	7.4%
Hispanic/Latino	75.9%
Black/White	7.4%
Alaskan Native or American Indian/White	.9%
Asian/Black/White	.9%
Indian/White	.9%
White/Hispanic	.9%
White	79.6%

Measures

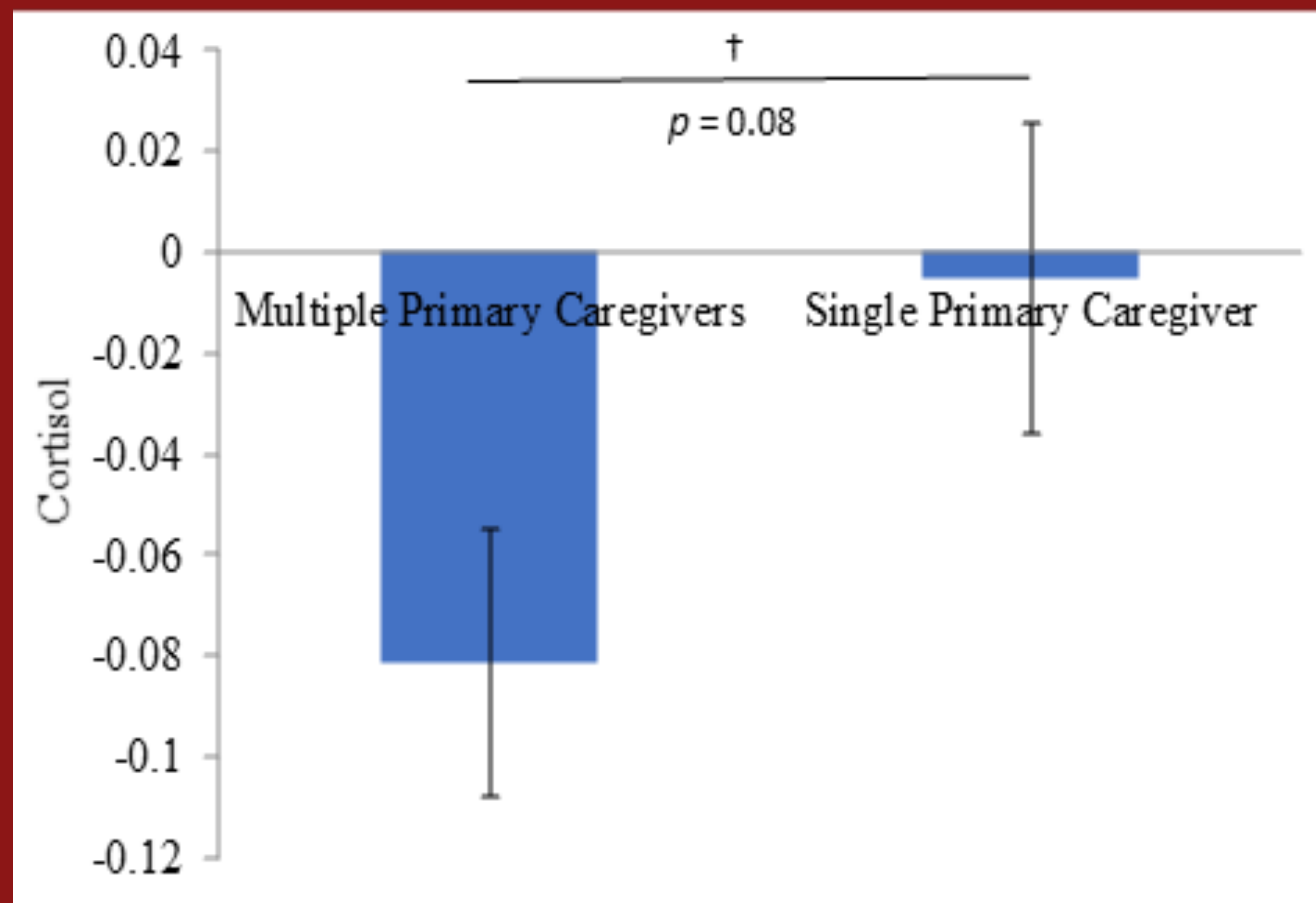
- Daily Living Routine subscale of the Child Routine Inventory-** Adapted version (Sytsma, Kelley, & Wymer, 2001)
- Cortisol levels-** assessed using saliva samples

Greater number of caregivers is marginally associated with lower basal cortisol levels in infants

Table 1. Linear Regression Predicting Cortisol Levels

Variable	B	95%CI	β	t	p
Intercept	-0.01	[-0.06, 0.05]		-0.19	.84
Routines ^b	0.00	[-0.01, 0.01]	-.01	-0.06	.95
Multiple Caregivers^c	-0.08	[-0.16, 0.01]	-.17	-1.76	.08†
Routines X Multiple Caregivers	0.00	[-0.02, 0.02]	-.003	-0.23	.98
Model Fit	$R^2 = .03$		$F(3, 104) = 1.05, p = .38$		

^a Cortisol levels were measured in $\mu\text{g/dl}$ and then regressed on time of day. The unstandardized residuals were used for analysis.; ^b Routines was mean-centered; ^c Multiple Caregivers was coded as 0 = No, 1 = Yes



RESULTS

- A linear regression where cortisol was predicted by routines and number of caregivers (one vs. multiple) was conducted, see Table 1.
- There was a marginally significant effect of number of caregivers (see Figure 1) and all other effects were non-significant.

DISCUSSION

- It was expected that adherence to family routines would act as a protective factor against adverse effects resulting from home instability in the form of the number of caregivers and elevated cortisol levels
- Contrary to hypothesis, adherence to household routines does not moderate the relationship between number of caregivers and cortisol levels in infants.
- Instead, the greater number of caregivers infants had the lower their cortisol levels were
- Findings suggest that number of caregivers may be a protective factor against infant stress

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